NEW CALIFORNIA THYSANOPTERA

BY DUDLEY MOULTON
San Francisco, California

This paper adds ten species of Thysanoptera to the California fauna; seven of these are new species; two, *Franklinothrips vespiformis* Crawford and *Tæniothrips blacki* Watson have been found in California for the first time and *Tæniothrips vulgatissimus* var. *americanus* has been rated as a new variety. It can be separated from the European form only by minor differences and could perhaps be more properly placed as an American race of the European *vulgatissimus*. The two genera, *Formicothrips* Priesner and *Pœcilothrips* Uzel have been represented heretofore each by a single species and it is interesting to note that we are here adding a second species to each one of these genera. *Haplothrips gaviotæ* apparently belongs to the subgenus *Chonothrips* John, in which also there is only one known species. The synonyms of *Frankliniella californica* Moulton are listed and it is pointed out that this species does not belong in the *tritici* group, also that *F. tritici* Fitch, as far as we know, has not been found west of the Rocky Mountains. Entomologists have generally classified our western flower-inhabiting thrips as *F. tritici*, but this is an error, the common western species being either *F. occidentalis*, especially in southern California, or the light colored form of *F. californicus* in upper California and other more northern states. I have a large series of these two species before me and will give more consideration to them in a later paper.

Aeolothrips yosemitæ Moulton, n. sp.

Female, holotype: Color of body and legs dark reddish brown except extreme tips of fore tibiæ and basal two-thirds of fore tarsi which are yellowish. Antennal segments one and two, except at tips, are concolorous with head, three, except at extreme tip and basal two-thirds of four are whitish yellow with distal portions grayish brown, five to nine are grayish brown except basal third of five, which is much lighter. Each fore wing transparent in anterior half except at veins, which are distinctly yellowish, with a brown posterior longitudinal band extending from extreme base, including scale, to tip. Red pigment conspicuous in posterior longitudinal vein and posterior part of ring vein, also in cross veins wherever they are placed within the darkened area. Longitudinal bands of hind wings present but less distinct.

Total body length 1.82 mm., head length .183 mm.; width .17 mm.; prothorax length .16 mm., width .19 mm.; mesothorax width .30 mm. Antennæ: length (width) I, 30 (36); II, 48 (30); III, 105 (24); IV, 93 (24); V, 69 (24); VI to IX, subequal and together 51 microns; total 400 microns. Length of spines: on median outer angles of mesonotal plate 27 microns, on posterior outer angles 36 microns, spines on ninth and tenth abdominal segments 195 microns.

Head as long or slightly longer than wide, depressed and wrinkled in front; cheeks slightly arched. Eyes prominent, protruding in front but not at the sides, prolonged posteriorly on ventral side. Ocelli and mouth-cone normal. Antennæ 2.16 times longer than head, with last four segments compact and together shorter than five. Ventral sense area on segment three broadly ovate, occupying about one-fourth the length of the segment, sense area on segment four occupying about three-fifths the length of the segment, bent and very broad in outer third where it occupies approximately one-third the width of the segment, transparent area on segment five elongate, as also on six where it occupies nearly the entire length of the segment.

Prothorax shorter than head, and only slightly wider. Mesothorax clearly wider. Legs long and slender with fore femora somewhat thickened. Wings with longitudinal veins normal. Two cross veins connecting costa with fore longitudinal vein on left wing and three cross veins on right wing, but this is abnormal, as there are only two on other paratypes; one median cross vein connecting longitudinal veins and one cross vein connecting posterior longitudinal vein and posterior part of ring vein; second cross vein vestigial. In *yosemitæ* red pigment is conspicuous in all veins included within the darkened area of the fore wings. Abdomen normal.

Type material: Female holotype and 9 ♀ paratypes taken on *Ceanothus integerrimus,* June 22, 1927, by the author. All types in author's collection. (Moulton No. 1759.)

Type locality: Yosemite Valley, California.

This species is most closely related to *vittipennis* Hood. It may at once be separated by the lighter color of antennal segments five to nine, especially the basal part of segment five, by its shorter third and longer fourth antennal segments, by its broadly ovate sense area on segment three and the posterior longitudinal dark wing bands which are not developed into cross bands in the center of the wings, and though slightly protruding at this point the bands do not exceed 67 microns in width. *Mexicanus* Pr. may be separated from *yosemitæ* by the cross bands which may be 155 microns, or covering nearly the entire

width of the wing, and by the dark colored fifth to ninth antennal segments.

FRANKLINOTHRIPS VESPIFORMIS Crawford

Three females taken on citrus trees in the Imperial Valley, California, October 10, 1926, by Mr. E. A. McGregor, (Moulton No. 1155-1157). This extends the distribution of this species to Southern California.

Anaphothrips minutus Moulton, n. sp.

Female, holotype: Color brownish yellow, including legs and wings. Antennal segments one and two yellow, three clear yellow in basal third, shading to light gray-brown, four like three but somewhat darker, five to eight gray-brown. Crescents of ocelli brownish yellow.

Total body length .68 mm.; head length .063 mm., width .105 mm.; prothorax length .09 mm., width .15 mm.; pterothorax width .177 mm. Antennæ: length (width) I, 12 (21); II, 30 (21); III, 36 (18); IV, 30 (18); V, 25 (16); VI, 34 (15); VII, 6; VIII, 9; total length 153 microns. Length of spines: median dorsal pair on abdominal segments, I, 15 microns; II, 21 microns; III, 27 microns; IV, 33 microns; V, 45 microns; VI, 54-60 microns; VII, VIII, 60 microns. Spines along posterior margin of ninth abdominal segment, outer 54, inner 30 microns.

Head clearly transverse, without prominent spines. Eyes relatively large, together occupying about .6 the width of head. Ocelli approximate and contiguous to inner margin of eyes. Mouth-cone reaching to posterior margin of prosternum. Antennæ 8-segmented; 2.5 times longer than head, without transverse suture on segment six, segments three to six each with pedicel, five and six being clearly separated.

Prothorax without conspicuous markings or spines. Metanotum indistinctly reticulate. Wings fully developed, ring vein and two longitudinal veins distinct. Fore-vein joining ring-vein near tip, hind vein beginning at base of wing but abruptly broken before cross vein, ending abruptly at beginning of last fifth of wing's length. All spines short, transparent and very difficult to determine, fore-vein with seven to eight in basal half and two at tip, hind vein with two on broken end before cross vein and five beyond.

Tergites of abdomen each with a pair of spines in the center near anterior margin. These are small on the first and gradually become longer and are placed farther apart to segment seven, on eight they are again somewhat closer together. Outer pair of spines along posterior margin of ninth segment approximately twice as long as inner pair, bristles at end of tenth segment very small. Eighth segment with complete comb along posterior margin.

Type material: Female holotype, one female allotype taken on *Euphorbia albomarginata,* October 5, 1927 (E. A. McGregor). Types in author's collection. (Moulton No. 2448.)

Type locality: Porterville, California.

This species resembles *A. arizonensis* Morgan, but may be easily separated by the number of spines on principal veins of wing, *arizonensis* having fifteen on fore vein and nine on hind vein.

FRANKLINIELLA CALIFORNICUS Moulton

Euthrips tritici californicus Moulton, 1911; North American Thysanoptera, U. S. Dept. Agric., Bureau Ent., Tech. Series 21, p. 28.

Euthrips tritici moultoni Hood, 1914; Proc. Ent. Soc., Wash., Vol. XVI, p. 38.

Frankliniella tritici californica M. Watson, 1923; Thys. North America, Florida Agric. Exp. Station, Tech. Bull. 168, p. 39.

Frankliniella claripennis Morgan, 1925; Can. Ent., Vol. LVII, p. 142.

Frankliniella canadensis Morgan, 1925; Can. Ent., Vol. LVII, p. 143.

Frankliniella moultoni Hood; Essig, 1926; Insects Western North America, Macmillan Co., N. Y., p. 188.

I have before me the types of *tritici californicus* and numerous specimens from many host plants taken throughout California, Oregon, Washington, British Columbia, Colorado, Wyoming, Idaho and Montana, and especially a series taken on *Schizonotus discolor* at Wenatchee, Washington, June 29, 1916, by Mr. E. J. Newcomber, also a second larger series taken from alfalfa blossoms at Fort Collins, Colorado, February 9, 1925, by Dr. C. P. Gillette.

The species *claripennis* Morgan was described from specimens taken by Mr. Newcomber and bear the same host plant, date and locality as the material before me and, as my specimens compare favorably with the description of the species as given, I presume that they are practically identical with those in the collection of Mr. Morgan. The large series from Fort Collins, Colorado, were collected from blossoms of alfalfa, radish, *Helianthus* and other hosts. The specimens are practically identical with the description of *canadensis* Morgan, which latter species also was recorded as being found in California. A careful comparison shows that *claripennis* and *canadensis* are identical with *californicus.*

Californicus was originally described as a variety of *tritici,* but the pedicel of the third antennal segment is only slightly

swollen in the distal portion and is without an angular emargination which places it distinctly in the *intonsa-occidentalis* and not in the *tritici* group. It is probably the most common species found in the Western United States and variations in color and size are rather marked. Its color, however, is usually distinctly brownish as compared to the predominating yellow of *occidentalis*. It is larger than *occidentalis* and the comb along posterior margin of the eighth abdominal segment is usually complete though sparse, and is composed of twelve to fourteen microscopic setæ. *Occidentalis* is smaller and the comb along posterior margin of eighth abdominal segment may be absent or broken in the middle, but when present is also sparse and the middle setæ are more or less rudimentary. *Occidentalis* is found more commonly in Southern California, while *californicus* is the common form in Central and Northern California and other more northerly states. *F. tritici* Fitch, so far as I know, has not been found west of the Rocky Mountains.

Tæniothrips albipennis Moulton, n. sp.

Female, holotype: Body color almost uniformly clear white except antennal segments six to eight, which are gray-brown with segment six lighter at base.

Total body length .92 mm.; head length .075 mm., width .12 mm.; prothorax length .102 mm., width .135 mm.; pterothorax width .183 mm. Antennæ: length (width) I, 15 (24); II, 33 (24); III, 36 (16); IV, 30 (18); V, 27 (16); VI, 52 (18); VII, 9; VIII, 15; total length 195 microns. Length of spines: interocellars 54 microns, pair on posterior angles of prothorax 51 microns, along posterior margin, inner 36 microns, outer 24 microns, longest on ninth and tenth abdominal segments 60 microns.

Head distinctly transverse 1.6 times wider than long; cheeks slightly arched. Interocellar spines very long, placed between posterior ocelli and on a line connecting their anterior margins, other head spines inconspicuous. Eyes large, prominent, slightly protruding, occupying fully half the length of head. Ocelli small and inconspicuous, crescents colorless. Mouth-cone moderately pointed, reaching posterior margin of prosternum. Antennæ 1.6 times longer than head, all segments reasonably short and stout, segment six longest of all.

Prothorax with two pairs of spines along anterior margin, the inner of which is somewhat longer than the outer, two long spines on each posterior angle and two pairs along posterior margin, the inner of which is much longer than the other.

Mesonotum with two spines on either side, the anterior pair placed near center on either side along anterior margin, the posterior pair

placed behind the anterior ones and a little toward the center. Wings fully developed, veins inconspicuous, with spines as follows: costa 18, fore longitudinal vein 3, 3—2, hind vein with 10. Eighth abdominal segment with fully developed comb along the posterior margin, spines on segments nine and ten about as long as tenth segment.

Type material: Female holotype and three ♀ paratypes taken on *Cornus* sp., August 17, 1928, by the writer. Types in author's collection. (Moulton No. 2975.)

Type locality: Eel River, Shasta County, California.

The ♀ of this species has the same general appearance and could easily be mistaken for *Rhopholandrothrips corni* Moulton, which was taken on the same host plant, but upon close examination may be distinguished by the more compact intermediate antennal segments, the presence of a pair of spines instead of a single one on each side along posterior margin of prothorax and the absence of clearly defined longitudinal veins on fore wings. It is separated from *T. alba* Moulton, to which it is probably most nearly related, by the much shorter third and fourth antennal segments. *T. costalis* Jones is larger with crescents of ocelli reddish orange in color. The second antennal segment of *T. salicis* Reuter is also dark gray-brown like segments five and eight, and the ocelli are clear red. The intermediate antennal segments of *T. albidicornis* Knechtel are distinctly more constricted at the end.

Tæniothrips blacki Watson

One female specimen taken on clover in Yosemite Valley, California, June 24, 1927, by the writer (Moulton No. 1758). This is the first time this species has been found in the State of California.

Tæniothrips vulgatissimus americanus Moulton, n. var.

Dr. H. Priesner, who has examined a series of these specimens from the Yosemite Valley, California, and Colorado, offers the following comments: "A new species or American race of *vulgatissimus* Hal. The sternites of the male have more oval impressions than *vulgatissimus* and the female has little darker wings." I have a large series before me, including also specimens collected in Canada, and have compared them with the European *vulgatissimus*. It is difficult to detect any material differences between the females of the European and the American forms except perhaps as Dr. Priesner has noted,

"a little darker coloration in the wings." The males, however, show a rather marked variation in their darker color and the more oval-shaped impressions on the sternites. I am therefore classifying the American form as a new variety.

Haplothrips ryani Moulton, n. sp.

Female, holotype: Body color brown with abdominal segments one to six somewhat clearer, all femora, middle and hind tibiæ brown, fore tibiæ brown shading to yellow in outer third, all tarsi yellow, each with a distinct black spot at tip on the inside. Antennal segments one and two brown, the first lighter at base, the second lighter at tip, three to eight yellow with a slight shading of gray on the two distal segments.

Total body length 2.3 mm.; head length .25 mm., width .216 mm.; prothorax length .20 mm., width .33 mm.; pterothorax width .35 mm.; tube length .13 mm., width at base .072 mm. Antennæ: length (width) I, 33; II, 48 (33); III, 57 (30); IV, 60 (33); V, 51 (30); VI, 48 (24); VII, 48 (21); VIII, 36; total length 384 microns. Length of spines: postoculars 60 microns, at anterior angles of prothorax 45 microns, a pair on posterior angles 60 microns, on posterior angles of ninth abdominal segment 75 microns, on posterior margin 105 microns, at tip of tube 144 microns.

Head 1.2 times longer than wide; cheeks almost parallel, without markings or sculpturing. Postocular spines well developed, placed 15 microns away from eyes, with blunt tips. Eyes and ocelli normally developed. Mouth-cone broadly rounded, very short, extending only to middle of prosternum. Antennæ 1.5 times longer than head, segment three club-shaped, almost symmetrical, increasing in size gradually from a small pedicel, broadly rounded at two-thirds its length and again gradually reduced. Segment four small at base, broadly ovate in middle and gradually reduced toward tip; segment five small at base, oblong-ovate, but broader than four at tip, segments six and seven clearly pedicellate; two sense cones on segment three, four on segment four, two normal and one rudimentary on five and six, one on seven.

Prothorax shorter and wider than head, a single moderately long spine at each anterior angle and a pair at each posterior angle. Midlaterals apparently wanting. These spines, like the postoculars with blunt but not dilated tips. Pterothorax only a little wider than prothorax, sides evenly formed. Legs comparatively short and stout, each fore tarsus armed with a tooth toward the end on the inside, but not claw-shaped as in the subgenus *Karnyothrips* Watson. Wings represented only by very short pads.

Abdomen elongate, evenly formed, segments reduced gradually beyond the sixth, tube short, twice as long as width at base and approximately .5 as long as head. Terminal spines moderately short.

Male allotype: Similar in shape and color to female, but somewhat smaller with total body length 1.58 mm. Fore tarsi armed as in the female.

Larvæ uniformly clear light yellowish brown with antennal segments two to seven gradually shading to dark gray and distal half of tube gray. Red pigment in broken blotches throughout body.

Type material: Female holotype, male allotype, 25 ♀ and 3 ♂ paratypes and two larvæ taken on *Yucca pendula* var. *glauca,* June 7, 1928 (H. J. Ryan) and named in honor of Mr. Ryan, Horticultural Commissioner of Los Angeles County. Types in author's collection. (Moulton Nos. 2771, 2828).

Type locality: Pasadena, Los Angeles County, California.

This species resembles *H. gangelbaueri* Schmutz from Ceylon, but is at once separated by the presence of both an inner and outer sense cone on third antennal segment, the absence of wings and blunt bristles. *Gangelbaueri* has only one sense cone on antennal segment three, wings are fully developed and bristles have dilated tips.

Haplothrips (Chonothrips) gaviotæ Moulton, n. sp.

Female holotype: Body color uniformly dark brown, including legs and all segments of antennæ except only the third, which is brown.

Total body length 1.5 mm.; head length .183 mm., width .183 mm.; prothorax length, .11 mm., width .26 mm.; pterothorax width .30 mm.; tube length .14 mm., width at base .70 mm., width at tip .35 mm. Antennæ: length (width) I, 18 (33); II, 48 (33); III, 48 (33); IV, 48 (33); V, 48 (30); VI, 48 (30); VII, 48 (28); VIII, 30; total length 330 microns. Length of spines: postoculars 45 microns, on anterior margin and angles of prothorax 30 microns, mid-laterals 45 microns, on posterior angles, inner 54 microns, outer 66 microns, spines on ninth abdominal segment 31 microns, at tip of tube 69 microns.

Head as wide as long; cheeks, including margins of eyes, evenly and slightly arched. Postocular spines well developed, with pointed tips. Eyes normal. Ocelli apparently wanting. Mouth-cone reaching to posterior margin of prosternum, clearly constricted in the middle with labrum drawn out to a rather sharp point. Labium constricted before the end, but clearly broadly rounded at tip. Antennæ 8-segmented, 1.8 times longer than head, segment three broadly clavate, 1.5 times longer than wide, reduced gradually to a narrow pedicel, segments four to seven inclusive subequal in length, each pair with a distinct though broad pedicel, segment eight cone-shaped, joined broadly to segment seven and not constricted at the base.

Segment three with one small sense cone on outer distal margin, none on inner margin, four and five each with two, and six with two plus one rudimentary cone.

Prothorax .66 as long as head and more than twice as wide as long; pair of spines along anterior margin well developed and about equal in length to those on anterior angles; mid-laterals somewhat longer, a pair on each posterior angle well developed, the outer of which is clearly longer than the inner. Pterothorax relatively small, only a little wider than prothorax. Legs moderately short and stout. Middle and hind femora almost as large as fore femora. Fore tarsi unarmed except for the usual claws. Wings rudimentary.

Abdomen broadly ovate, "S"-shaped wing-holding spines vestigial, other spines moderately short. Tube .75 as long as head, reduced gradually from base to tip. Longest spines on ninth abdominal segment, and tip of tube much shorter than tube.

Type material: Female holotype, six ♀ paratypes taken on *Adenostoma fasciculatum* on May 15, 1928, by the writer. Types in author's collection (Moulton No. 2784). This species is named after the type locality.

Type locality: Gaviota Pass, Santa Barbara County, California.

This species seems to belong in the subgenus *Chonothrips* John, because of the very compact segments of the antennæ, segment three being only approximately 1.5 times longer than wide, the rudimentary wings, and the single well developed sense cone on segment three. It is easily distinguished from the single species in this genus, *H. crassicornis* John, by its dark color, pointed bristles and longer antennal segments two, three and six. In *crassicornis* antennal segments three to six are yellow, fore tibiæ are mostly yellow, middle and hind tibiæ are yellow at the ends, all tarsi are yellow, also postocular spines have dilated tips.

Pœcilothrips lupini Moulton, n. sp.

Female, holotype: Color reddish brown. Antennal segments one, two, seven and eight brown with one and two darker than the others, three whitish yellow, light grayish brown in distal half, but whitish yellow again at the end, four and five grayish brown, each lighter in basal third and at tip, six grayish brown somewhat lighter at base. All femora brown, all tibiæ yellowish at both ends with fore tibia lighter. All tarsi yellowish brown with fore tarsi lighter. Fore wings whitish in basal and distal fourths, uniformly light brownish gray in second and third fourths. Red body pigment prominent.

Total body length 1.66 mm.; head length .27 mm., width .22 mm.; prothorax length .13 mm., width, .23 mm.; mesothorax width .30 mm.;

tube length .166 mm., width at base .06 mm., width at tip .05 mm. Antennæ: length (width) I, 30 (33); II, 51 (33); III, 60 (34); IV, 62 (36); V, 51 (30); VI, 42 (27); VII, 39 (24); VIII, 30; total length 355 microns. Length of spines: on anterior angles of prothorax 24 microns, mid-laterals 22 microns, on posterior angles 45 microns, ninth abdominal segment 72 microns, at tip of tube 150 microns. Basal wing spines 27, 27 and 39 respectively.

Head 1.2 times longer than wide, widest behind eyes; cheeks almost straight and parallel, very slightly narrowed toward the base, postoculars vestigial, other head spines extremely small. Eyes large, oblong in shape, occupying about one-third the length of the head, their interval being less than the width of a single eye. Ocelli rather closely placed, posterior pair contiguous with inner margins of eyes. Mouth cone long and narrow, reaching almost to posterior margin of mesosternum. Antennæ 1.3 times longer than head, segment three broadest in the third quarter with sides reduced evenly and gradually to the base, abruptly constricted at the tip, segments four and five broadly clavate, six and seven ovate with narrowed pedicels, eight constricted at the base and clearly separated from seven. Sense area on segment two placed near middle, sense cones moderately broad and stout, placed as follows: two on segment three, four on four, two and one rudimentary cone on five, two and one rudimentary on six, one on seven.

Prothorax small, only a little wider than head and half as long. Prominent spines short and stout with widely dilated, almost funnel-shaped tips. Spines on posterior angles twice as long as mid-laterals and those on anterior angles. Pterothorax much wider than prothorax. All legs moderately slender, fore-femora only slightly thickened, tarsi unarmed. Wings with parallel sides, with nine double-fringe-hairs along posterior margin of each fore wing.

Abdomen normal. Tube .6 as long as head, almost cylindrical, slightly swollen at the base and only very slightly reduced at the tip.

Type material: Female holotype taken on wild lupine, July 11, 1925, by the writer. Type in author's collection. (Moulton No. 404).

Type locality: Mountain View, California.

In this genus there is only one other species, *albopictus* Uzel, Europe, which has distinct whitish longitudinal bands extending from head to abdomen. These bands are almost obsolete in *lupini*. The head is colored darker at the sides and toward the middle which produces an indistinct and lighter area between. The thorax is slightly darker at the sides with a more or less mottled effect within so that *lupini* can be easily determined from *albopictus* by the absence of these distinct bands.

Formicothrips yosemitæ Moulton, n. sp.

Female, holotype: Color chestnut brown with back of head and thorax yellowish brown, segments of abdomen darker at the sides with indistinct darker cross bands giving a more or less mottled effect. Legs brownish yellow with outer margins of all femora and tibiæ shaded dark brown, all tarsi brownish yellow. Antennal segments one and two whitish yellow, three brownish yellow, four brown, lighter at base, middle and tip, five to eight blackish brown.

Total body length 2.7 mm.; head length .53 mm., width behind eyes .37 mm., at neck .2 mm.; prothorax length .30 mm., width in center, not including coxæ, .31 mm.; pterothorax width .30 mm.; greatest width of abdomen .60 mm.; tube length .21 mm., width at base .116 mm., at tip .066 mm. Antennæ: length (width) I, 54 (45); II, 75 (45); III, 156 (45); IV, 108 (45); V, 114 (45); VI, 90 (42); VII, 75 (33); VIII, 60; total length 667 microns. Length of spines: a pair with dilated tips near base of antenna 33 microns, on anterior angles of prothorax 24 microns, on posterior angles 33 microns, a pair near center of hump on mesonotum 33 microns, on ninth abdominal segment, outer 129 microns, inner 110 microns, at tip of tube 120 microns.

Head large, broadly rounded in front, including outer margins of eyes, with a slight constriction immediately behind eyes; cheeks broadly rounded; back of head clearly constricted, neck-like. A single short, blunt spine just above base of each antenna and several similar short, blunt spines on cheeks. A pair of long, pointed spines on ventral side of head placed close together (12 microns apart) in the center just below base of antennæ, 180 microns long, another pair of long, pointed spines of approximately the same length on ventral side just anterior to base of mouth-cone. Eyes relatively small, not protruding. Ocelli wanting. Mouth-cone short and blunt, extending about two-thirds across prosternum. Maxillary palpi apparently with two segments, labial palpi very small, each apparently with one segment. Mouth-cone with several long pointed hairs (75 microns), a few on labium near base of each labial palpus, two on each side near base of maxillary palpus and several above on labrum. Antennæ 1.26 times as long as head with segments one to four inclusive of equal width, segment three longest, four and five about equal, others reduced gradually, segments five and six produced at end ventrally into a distinct angular process when viewed from the side, each of which bears a series of three sharp spines. Spines on segments one and two with dilated tips similar to other short body spines, those on other segments pointed. Segments three, four and five each with two short sense cones.

Prothorax smaller than head, rounded, and in side view clearly humped, spines on all angles short, with dilated tips. Pterothorax small. Metanotal plate wider than long, with net-like sculpturing

and humped when viewed from the side, a pair of short dilated spines near the center and a single one near the middle on either side. All femora somewhat thickened, foretarsi armed. Wings wanting.

Abdomen elongate-ovate with eighth and ninth segments much reduced. Tube short .4 as long as head and only twice as long as basal width. Long spines on eighth and ninth segments with blunt tips. Spines at tip of tube .3 as long as tube.

Larvæ with the head and prothorax, ninth and tenth abdominal segments and all segments of the antennæ uniformly deep brown; all legs of a similar color, but with tibiæ shading gradually lighter toward the tips, tarsi light brown. All body spines with strongly dilated tips. Head large, subrectangular in shape.

Type material: Female holotype, 3 ♀ paratypes and 7 larvæ taken by sweeping grass, June 24, 1927 (D. Moulton). Types in author's collection. (Moulton No. 1763.)

Type locality: Yosemite Valley, California.

F. dampfi Priesner, the only other known species in the genus, is deep black in color with antennal segments one and two whitish and three to eight deep black. *F. yosemitæ* is chestnut brown in color, antennal segments one and two are whitish to whitish yellow, three brownish yellow, four mottled brown and five to eight blackish brown. There are other differences, principally in the shape of the head and the hump-like projections of the prothorax.

Change of Names

Two Cerambycidæ which I have described, I find have names which are preoccupied, so I will now change them as follows:

Neoclytus basalis (Pan-Pacific Ent., III (1926-27), p. 106), to **Neoclytus basillaris.** The specific name *basalis* was previously used for a species from South America, described by Chevrolet (Ann. Soc. Ent. Fr. (4) I, 1861, p. 384), but unfortunately listed in later catalogues as a *Clytus.* My attention was kindly drawn to this mistake by Mr. George Hopping.

Xylotrechus cinereus (Bul. Brook. Ent. Soc., XV (1920), p. 41) to **Xylotrechus abietis.** The name *cinereus* was previously used for a species described as *Clytus cinereus* by Laporte and Gory, 1836, from the mountains of southern Europe. It has only recently been listed as a *Xylotrechus.*—Edwin C. Van Dyke.